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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,631	01/15/2004	Wayne A. Rogers	PC-1478	6123
23717	7590	08/23/2005	EXAMINER	
LAW OFFICES OF BRIAN S STEINBERGER 101 BREVARD AVENUE COCOA, FL 32922			RUSSELL, CHRISTINA MARIE	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/758,631	ROGERS, WAYNE A.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Christina Russell	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-20 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                  |                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                      | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                             | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____                                                |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

2. Music box (35) is referenced to Figure 1 but does not appear in Figure 1.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

1. The disclosure is objected to because of the following informalities:

2. There are no Figure numbers corresponding to certain reference numbers. For example, when the three different transducers (75, 87, and 105) are first mentioned and

described no figure numbers were given for reference. Also when the microphone (75) is mentioned for the first time no figure number was referenced.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. The term "up to approximately" in claim 9 is a relative term which renders the claim indefinite. The term "up to approximately" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The dimensions noted in this claim have been rendered indefinite by the use of the term "up to approximately".

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4-8, 10, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by the US patent to Ikuma (4,501,186).
6. In terms of claims 1 and 2 Ikuma teaches a removable pickup unit for stringed instruments, particularly an acoustic guitar, mounted within a sound hole (see abstract), having multiple pickup sensors (see column 4, lines 61-63), tuning members for the sensors (see column 3, line 55 – column 4, line 6), and a connector for connecting the unit to an external amplifier (see column 4, lines 38-42).
7. As for claim 4, Ikuma shows the tuning members as rotating knobs (see Figure 6).
8. As for claim 5, Ikuma teaches a master volume control, for overall control of the pickup sensors (see column 6, lines 10-22).
9. Ikuma further teaches claim 6, by having a clamp for mounting the unit without causing damage to the instrument (see column 5, lines 59-64).
10. As for claims 7 and 8, Ikuma teaches of a pre-amp for the internal sensors, connected to the pickup unit (column 3, lines 39-43, and column 5, lines 64-65) and a battery for supplying power to the unit (see column 6, lines 5-7).
11. In terms of claim 10, Ikuma teaches a method for adjusting a range of frequencies from a stringed instrument with strings, a bridge, sound board and sound box or body (see column 1, lines 6-9, column 2, lines 4-15, column 3, lines 22-23, column 5, lines 23-25, and column 5, lines 45-51). This method taught, comprises the

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sensing of acoustical frequency waves (see column 1, lines 9-12 and column 5, lines 35-39), the detecting of the motion of the strings and mechanical energy (see column 3, lines 32-38) and the combination of these three steps for connection to an external amplifier (see column 4, lines 38-42).

12. As for claim 16, Ikuma teaches the motion detector being a magnetic transducer (see column 3, lines 32-38).

13. As for claim 18, Ikuma teaches a master volume knob for control of the combined detecting steps (see column 6, lines 10-22, figure 6 and figure 9).

### ***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 3, 9, 11-15, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikuma in view of the US patent to LaBarbera (6,441,293).

16. Ikuma teaches all of the claimed elements as disclosed in claim 3 and 14, incorporated from claim 1 and claim 10, and including the pickup sensors as a magnetic sensor and a piezoelectric transducer (see column 3, lines 32-38), except for the third pickup sensor as a microphone which senses acoustic waves. LaBarbera teaches this additional sensor as a microphone (see column 3, lines 38-420). It would have been

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obvious to one of ordinary skill in the art, at the time of the invention, to use the teaching of a microphone and incorporate that into the invention of Ikuma, who already states the possibility of having a plurality of pickup units (see column 4, lines 61-63). The microphone of LaBarbera can easily be incorporated into the pickup unit of Ikuma as an additional electromagnetic pickup sensor and can be used to pickup the acoustical waves and frequencies emanating from the instruments hollow body.

17. As for claims 11-13, Ikuma teaches all of the claimed elements dependent on claim 10, plus a clamping unit for mounting and a pre-amplifying unit (see column 5, lines 59-64, and column 3, lines 39-43), except for the mounting of the unit inside the sound box or sound body. LaBarbera teaches the internal mounting of a similar unit into the sound body of a hollow stringed instrument, and still allows for the combination and control of the different sensors (see Embodiment D, Figure 1 and column 2, lines 3-8). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to take the idea of internal mounting from LaBarbera, and use it to mount the unit of Ikuma. The same mounting techniques used by Ikuma can be used for this internal mounting instead of mounting across the sound hole; the unit is merely lowered into the body of the instrument instead of resting across it.

18. As for claim 15, Ikuma teaches all of the claimed elements dependent upon claim 10, except for the addition of the mechanical sensor as a piezo pressure transducer. LaBarbera however teaches such transducers (see column 1, lines 43-45 and column 3, line 65 – column 4, line 1). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the teaching of a piezo pressure transducer of

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LaBarbera and incorporate it into the unit of Ikuma. A piezo pressure transducer can easily be a substitute for the piezoelectric transducer mechanical pickup device.

19. As for claim 17 and 19, Ikuma teaches all of the claimed elements dependent upon claim 10 and the use of an overall volume control (see 102(b) rejection for claim 18), except for the individual control of the separate sensing and detecting steps with knobs. LaBarbera teaches said control knobs (see column 7, lines 8-11, 24-26, 51-65, and Figures 8-10 (control knobs on synthesizer and mixer for corresponding input signals from the different sensors)). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to add extra knobs or potentiometers to the unit of Ikuma for additional control over the signals before they were mixed and combined in the circuit.

20. As for claim 20, Ikuma teaches all the claimed elements dependent upon claim 10, except for the addition of separate amplifiers for the separate outputs. LaBarbera teaches the idea of sending the separate outputs to separate interfaces (see column 3, lines 7-11 and column 6, lines 7-9). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to incorporate LaBarbera's idea of separate interfaces for the separate outputs to the unit of Ikuma. Instead of simply combining and mixing the multiple outputs, the outputs from Ikuma can be kept separated and transferred to separate interfaces, such as a mixer or amplifier instead of being combined and sent to one amplifier.



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***Conclusion***

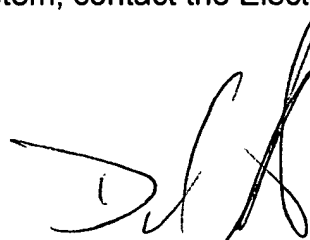
21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Us patents to Young, Jr. (5,052,269), Coopersmith et al. (5,567,903) and Pawar et al. (6,121,537).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Russell whose telephone number is 571-272-4350. The examiner can normally be reached on Mon-Fri, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CR  
8/10/2005



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